

JOURNAL OF
BUSINESS AND MANAGEMENT
Vol. 3, No.8, 2014: 925-939

ESTIMATING COMPANY VALUE CONSIDERING ITS FUTURE RISK BEFORE IPO OF PT KARYA INTERNUSA: A CONSTRUCTION COMPANY

Fawwaz Lu'ay Putri and Sudarso Kaderi Wiryono
School of Business and Management
Institut Teknologi Bandung, Indonesia
fawwaz@sbm-itb.ac.id

Abstract: In the last decades, the development in economy of Indonesia has been growing to the better stage. This development stimulates other sector to grow together. This situation attempts the company, which operates in infrastructure to compete to be the best in its business. PT Karya Internusa is a construction company who was established in 1997 and had been expand the business to batching plant sector in 2013. PT Karya Internusa specialized in construction and architecture, excavation foundation and fabrication and installation of steel construction. PT Karya Internusa has done many projects from big companies like Pertamina, PLN, Wilmar Indonesia, Petrokimia Gresik, etc. that makes the revenue of the company that has been growing in last few years and they always want to improve it since they want to being IPO (Initial Public Offering) in next five years. But, before that the company should know what are their future risk in order to estimate how much their value and what are the action required in order to increase the company value. Qualitative Method is used to measure the risk and Discounted Free Cash Flow approach is also used to determine the company value with considering the future risk. In conclusion, the range of PT Karya Internusa's value is IDR 220,138,861,481 to IDR 290,171,426,063. However, the company should do the risk mitigations, increase and maintain the future growth and reduce the cost of financing. It will help PT Karya Internusa to increase its value.

Keywords: Value, valuation, future risk, initial public offering (IPO)

Introduction

BPS stated that after crisis, in 2005 construction's contribution was 6.35%, then went up to 7.7% in 2007, increased to 8.4% and 9.6% in 2008 and 2009 respectively, then it still went up from 10.25% until 10.45% in 2010-2012. And last it increased into 10.54% in 2013. From the data above, we can say that this sector is very potential for business. This fact is supported by the increasing contract value of construction from year-to-year. In 2012, it reached Rp284 billions then keep increasing into Rp369 billions in 2013 and the contract value is forecasted become Rp407 billions this year (2014). This condition is a good chance for construction company to develop their business. One of the strategies to develop the business is by doing Initial Public Offering (IPO). It will make company get additional capital to develop their business become better than before. But before doing that the company should know how much their value with considering its future risk since we do not know what will be happened in the future.

Literature Review

Risk

There is not specific definition for risk. It depends on the people prospective. Some people think it is a danger that leads to the unexpected outcome, and other think it is an opportunity. From that thought, the highlight is uncertainty. Risk is strongly related with uncertainty. The uncertainty has two dimensions; first is the range of possible outcomes. It is resulting from an event or an action can be narrow, limited or unknown. Second is the probability of an outcome occurring. Probability means the chance that a particular outcome will occur. It may not be possible to calculate probability exactly, it only be an estimate because there are lack of information and other factors like bias and poor processing of available data.

Risk Management

As mentioned before, risk is uncertainty future outcomes. We do not know whether it is good or bad outcomes. So, in order to prevent the impact of risk, we manage the risk of the company internally and externally. There are some steps in risk management:

1. Risk Identification
Identify the possible of risk not only from internal and external of company but also the input-process-output flow of company.
2. Risk Measurement
Measure the risk in order to minimize the risk. In this step we will make a rank from the highest to the lowest risk with the probabilities.
3. Manage to Risk
Doing the risk mapping from the priority that already made. The priority is decided subjectively by management.
4. Risk Evaluation
Make a feedbacks for management. It should be done correctly for a consideration to identify risk in future.

Value

Aswath Damodaran states that value plays key role in many areas of finance – in corporate finance, in mergers and acquisitions and in portfolio management. In corporate finance, it is used to maximize firm value. In mergers and acquisitions, used to determine fair value before making a bid, and it is used for fundamental and technical analysis in portfolio management. In this research, it is focused in corporate finance to maximize firm value. It is related to financial condition and corporate strategy that reflects company internally. A company with good financial condition and corporate strategy certainly has a high value of company.

Valuation

"The process that links risk and return to determine the worth of an asset. It is a relatively simple process that can be applied to expected streams of benefits from bonds, stocks, income properties, oil wells, and so on. To determine an asset's worth at a given point in time, a financial manager uses the time value of money techniques." (Gitman, 2009: 239).

Valuation is a process to calculate company value. The value indicates the risk of assets of company to generate the return for the company. There are several methods to determine the value. However, in this research Discounted Free Cash Flow is used to determine the company value.

Discounted Free Cash Flow

The process of valuing a company with the DCF method contains different stages. In the first stage scenarios are developed to predict future free cash flows (FCF) for the next five to ten years. Afterwards, an appropriate discount rate, the weighted average cost of capital (WACC) has to be determined to discount all future FCFs to calculate their NPVs. In the next step the terminal value (TV) has to be identified. The TV is the net present value of all future cash flows that accrue after the time period that is covered by the scenario analysis. In the last step the net present values of the cash flows are summed up with the terminal value.

$$Value = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t} + Terminal\ Value$$

Where:

n = The number of year of the asset

r = The discount rate

CF_t = Cash flow in year t

Scenario Analysis

It is an approach for assessing possible alternative outcomes (scenarios) to obtain a sense of the variability among returns. There are three kind of scenario's outcome, pessimistic, most likely and optimistic. Pessimistic tells the worst case of the company. This scenario does not expected by every company because it has less risk, which leads to less return. Whereas, most likely represents the most company's expectation. This scenario is most realistic according to the company since it is the most probable condition that might be happened in the future. And the last is optimistic. This scenario will have the best outcomes that company might be achieved. But this scenario has higher risk than pessimistic and optimistic because this scenario will generate higher return than others.

Pro forma Financial Statement

Pro Forma Statement forecasts the financial condition of the company in the future years. There are two steps in preparing the Pro Forma Statement:

1. The company has to have the previous financial statement.
2. The company has to make sales forecast for the next year using the previous financial statement as historical data.

To make a Pro Forma Statement in the future years, the company has to make assumptions, including sales forecast, risk premium and beta of the company.

Sales Forecast

Sales forecast is the most important factor to be predicted because it determines the ability of company to generate sales and it is affecting financial statement of the company in order to calculate company's value.

Beta Coefficient

Gitman states in his book "Principles of Managerial Finance" (2009) that beta coefficient is a relative measure of nondiversifiable risk. An index of the degree of movement of an asset's return in response to a change in the market return. it can be determined by measuring the slope between the return of the company with the stock market index. For indonesia, it called as IHSG (Indeks Harga Saham Gabungan).

Risk Premium

Risk premium measures the probability of financial loss of given asset in generating higher return for investors. Risk premium can be calculated by subtracting the risk market with the risk free.

Free Cash Flow

It represents the summation of the net amount of cash flow available to creditors and owners during the period. Free cash flow can be defined as follows:

$$\text{Free Cash Flow} = \text{Operation Cash Flow} - \text{Net Fixed Asset Investment} - \text{Net Current Asset Investment}$$

While Net Current Asset Investment can be calculated as shown here:

$$\text{Net Current Asset Investment} = \text{Change in Net Fixed Assets} + \text{Depreciation}$$

For reminder, if free cash flow is less or negative, it does not tell that the company is not profitable but it could indicate that the company is making big investment or expansion.

Weighted Average Cost of Capital

It can be calculated by multiply the specific cost of each form of financing by its proportion in the firm's capital structure and sum the weighted values. As an equation, the Weighted Average Cost of Capital can be specified as follows:

$$\text{WACC} = w_d \times r_d (1-T) + w_e \times r_e$$

Where:

w_d = proportion of debt

w_e = proportion of equity

r_d = cost of debt

r_e = cost of equity

T = taxes

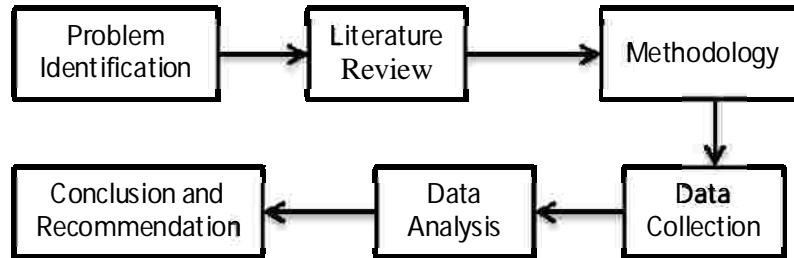
In this Discounted Cash Flow approach, WACC is used as the discount factor to get the present value of Free Cash Flow each year. Then it indicates the value of the company.

Initial Public Offering (IPO)

There are some procedure that company should do before doing IPO:

1. Preparation Step
Company has to prepare every documents required that regulated from BAPEPAM (Badan Pengawas Pasar Modal). BAPEPAM job is monitoring capital market in Indonesia in order to keep the company in the right track as ordered by Capital Market Law and its Implementation Rules. Beside that, the company must have an approval from shareholders. After the approval, the company has to appoint the underwriter, market institutions and supporting professions.
2. Registration-Statement Submitting Step
After preparation step, the company has to give supporting documents to BAPEPAM as required from the institution.
3. Shares Offering
Shaes offering refers to the company offer its stock to the investor's society. The company appoints selling agents of its stock to the primary market.
4. Shares Listing in the Exchange
The stocks are listed in the Indonesia Stock Exchange (IDX).

Methodology



Problem Identification: Explain the problem identification and research scope and limitation based on the case background

Literature Review: Explain the theories used to reach the main purpose of this research

Methodology: Method that will be used in the research.

Data Collection: The data gathering process that related with the main research topic

Data Analysis: The analyzed and calculated data as the core of this research

Conclusion & Recommendation: Shows the result of this research objective and conclude it to answer the entire research problem in order to make recommendation

Data Collection and Data Analysis

In this research, the researcher using Qualitative Method to identify and measure the risk and also using Discounted Free Cash Flow to calculate the company value with considering the risk. The researcher also use company's financial statement from 2009 until 2013 for making the projected free cash flow.

Risk Identification

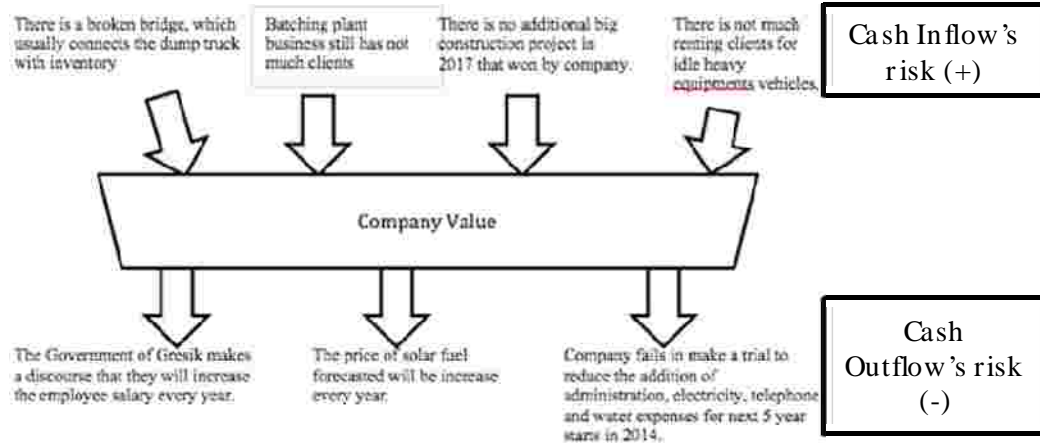
To get identify the risk of PT Karya Internusa's cash flow, observation to the locations and do an interview with the CEO (Chief of Executive Officer), Commisioner and CFO (Chief of Finance Officer) are the chosen method. After doing the observation and interview, researcher identify the risks of PT Karya Internusa as shown below:

- Based on operation activity (Operation Risk)
 1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015.
 2. The Government of Gresik makes a discourse that they will increase the employee salary every year.
 3. The price of solar fuel forecasted will be increase every year.
 4. Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014.
- Based on business activity (Business Risk)
 1. The new business expansion in batching plant still has not much clients.
 2. There is no additional big construction project in 2017 that won by PT Karya Internusa.
 3. There is not much renting clients for idle heavy equipments or transportation vehicles.

Risk Measurement

To measure the risk, Researcher still used Qualitative method which are by observation and interview with BOD of the company. The measurement will show from the impact until how

important the risk. Before measure the risk here is the diagram of risk based on cash in flow and out flow:



For the explanation, high level cash inflow's risks can reduce the company value because they are the source of income of the company that can effects the company profit, while the low level of cash inflow's risks will make the company value higher.

And for cash out flow's risk, the high level of it will reduce the company value because it will reduce the company profit whereas the low level of cash out flow's risk will make the company profit higher that can make the company value will be higher too. Company profit is the most important factor in determining company value. The higher company profit will make the higher company value. The next step is measure the risks one by one based on the impact and probability that will be presented below:

| Risk Type | Occasion | Impact | Impact Rating | Explanation |
|----------------------|---|-------------------------|---------------|--|
| OPERATIONAL RISK (O) | 1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. | Gradual Procurement | 4 | It makes only small dump trucks can passing by and also the portion of construction income is 70% from company's construction income. So, if the company cannot sell the material as much as company's target, it will reduce the company profit because the income from backfill will be significantly decreased. |
| | 2. The Government of Gresik makes a discourse that they will increase the employee salary every year. | Specification reduction | 2 | Because the employee of construction operation (for example; dump truck driver) is included to COGS so it will make the COGS higher and reduce the profit. Moreover, for the office employees, it will increase the employee expense so it will reduce the profit too. |
| | 3. The price of solar fuel forecasted will be increase every year. | Specification reduction | 2 | It can reduce profit growth because Cost of Goods Sold will be increased. |

| | | | | | |
|-----------------|----|---|--------------------------|---|--|
| | 4. | Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. | Operation can still run. | 1 | Because the portion of the expenses is small so it will not give a huge impact to the company profit. And also there is many ways to reduce expenses (ex. Open the office curtain in the morning until afternoon). |
| BUSINESSRISK(B) | 1. | The new business expansion in batching plant still has not much clients. | Operation can still run. | 1 | Because the portion of batching plant's income in the company's overall income is still small. So it will also give a small effect to company's overall income. |
| | 2. | There is no additional big civil construction project in 2017 that won by PT Karya Internusa. | Workscope reduction | 3 | Because one of company's business is civil construction, so if the company cannot won big project in 2017 it will reduce the workscope of PT Karya Internusa. |
| | 3. | There is not much renting clients for idle heavy equipments or transportation vehicles. | Operation can still run. | 1 | Because rent is not one of company's main business, so it has small effect to the company's income. |

| Risk Type | Occasion | Probability | Probability Rating | Explanation |
|--------------------|---|-------------|--------------------|--|
| OPERATIONAIRISK(O) | 1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. | Most likely | V | Because the bridge was nearly to be broken in early 2014 and the reparation progress is nearly to be done. |
| | 2. The Government of Gresik makes a discourse that they will increase the employee salary every year. | Most Likely | V | Because government increase the employee salary every year mostly based on the region development growth that always show the positive results every year. |
| | 3. The price of solar fuel forecasted will be increase every year. | Most Likely | V | Because government increase the solar fuel price every year mostly based on Indonesia's government regulation. |
| | 4. Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. | Likely | IV | Because it will be hard to change the behavior in using electricity, telephone, water and in administration but company still optimistic to be success. |

| | | | | |
|-------------------|--|--------------|----|---|
| BUSINESS RISK (B) | 1. The new business expansion in batching plant still has not much client. | Likely | IV | Because Batching plant business is still new but it has big companies become its clients. Maybe this networking will lead to the new customers. |
| | 2. There is no additional big construction project in 2017 that won by PT Karya Internusa. | Likely | IV | Because PT Karya Internusa has many great competitors who has big name. |
| | 3. There is not much renting clients for idle heavy equipments or transportation vehicles. | Less Likely. | II | Because PT Karya Internusa has many networks or partners that can be approached. |

After measure the impact and probability from each of risks, combining the impact and probability by multiplied them become the next step to estimate how big the level is then the estimation result is used to categorize the risk into several level based on the result. The estimation will be shown below:

| Risk Type | Occasion | Impact Rating | Probability Rating | Impact x Probability | Risk Level | Explanation |
|----------------------|---|---------------|--------------------|----------------------|------------|---|
| OPERATIONAL RISK (O) | 1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. | 4 | V | 20 | E | Because this risk will give the worst impact to the company (income from backfill is 70% from the total construction's income). This risk will give the portion of the construction's income smaller and it will reduce the company's profit. |
| | 2. The Government of Gresik makes a discourse that they will increase the employee salary every year. | 2 | V | 10 | M | Most of the company's employees are in operational sector which is the employee salary included to the COGS. So it will help the company in solving this risk and the impact to the company is not big. |
| | 3. The price of solar fuel forecasted will be increase every year. | 2 | V | 10 | M | The solar fuel price is included to COGS, so it will help the company in solving this risk and the impact is not big. |
| | 4. Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. | 1 | IV | 4 | L | Because expense's portion is very small so it will give very small impact to company's profit also. |

| | | | | | | | |
|-------------------|----|--|---|----|----|---|---|
| BUSINESS RISK (B) | 1. | The new business expansion in batching plant still has not much client. | 1 | IV | 4 | L | Batching plant is still new, the income target is not high, and it has big companies become the clients to achieve its target mostly. |
| | 2. | There is no additional big civil construction project in 2017 that won by PT Karya Intemusa. | 3 | IV | 12 | H | Because the company has many big competitors who has big name and if the company cannot get additional big project the workscope will reduce. |
| | 3. | There is not much renting clients for idle heavy equipments or transportation vehicles. | 1 | II | 2 | L | Because the company has many networks that can be approached and has client who rent the vehicles. It is not company's main business so it will give very small impact to the company's profit. |

After categorizing risk based on the risk impact multiplied by the probability, making the priority is the next step in order to give guidance to the company for which one is should be solved first (critical) until which one that can be solved later (not critical). The table of priority will be presented below:

| Risk Type | Occasion | Impact x Probability | Risk Level | Priority | Explanation |
|----------------------|---|----------------------|------------|----------|--|
| OPERATIONAL RISK (O) | 1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. | 20 | E | 1 | This is the most critical risk that should be immediately done because it can reduce the company's profit significantly. |
| | 2. The Government of Gresik makes a discourse that they will increase the employee salary every year. | 10 | M | 2 | This risk should be solved right away but it is less critical because the most of company's employees are operational employee, which is the operational employee expense is included to the COGS. |
| | 3. The price of solar fuel forecasted will be increase every year. | 10 | M | 2 | This risk should be solved right away but it is less critical because the solar fuel price is included to the COGS. |
| | 4. Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. | 4 | L | 4 | This risk is can be solved later and it is almost not critical since the expense's portion is very small. |
| BUSINESS RISK (B) | 1. The new business expansion in batching plant still has not much client. | 4 | L | 4 | This risk is can be solved later and it is almost not critical because it still new and batching plant already has big companies become their client. |

| | | | | | |
|--|---|----|---|---|--|
| | 2. There is no additional big civil construction project in 2017 that won by PT Karya Intemusa. | 12 | H | 2 | This risk is should be solved right away but it less critical because the company has networks that maybe can help the company to get project. |
| | 3. There is not much renting clients for idle heavy equipments or transportation vehicles. | 2 | L | 5 | This risk can be solved later because the company already has client who rent the vehicles and potential clients that can be approached. |

Management to Risk

After measure the risk, doing the risk mapping from the priority that already made is the next step. Management of the company decides the priority subjectively. The risk mapping of PT Karya Internusa will be shown below:

| LIKELYHOOD | IMPACT | | | | |
|-------------------------------|-------------------------|-------------------------|----------------------|---------------------|----------------------------|
| | Operation Can Still Run | Specification Reduction | Work scope Reduction | Gradual Procurement | Operation Activity Stopped |
| Almost Impossible to Happen | | | | | |
| Less Likely | B3 | | | | |
| Equally between Likely or Not | | | | | |
| Likely | B1 O4 | | B2 | | |
| Most Likely | | O3 O2 | | O1 | |

Risk Mitigation

| Risk Type | No | Risk | Options of Possible Mitigation and Actions | Chosen Option | Person In Charge | Method |
|----------------------|----|--|--|--|------------------|---|
| OPERATIONAL RISK (O) | 1 | There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. | <ul style="list-style-type: none"> Buy more small dump trucks. Just increase the offer to the customer near the storage, | Buy more small dump trucks. | COO | Give a report to COO about how many dump trucks needed then COO will discuss it with CEO and CFO. |
| | 2 | The Government of Gresik makes a discourse that they will increase the employee salary every year. | <ul style="list-style-type: none"> Reduce the number of employee. Increase company's income. | Increase company's income | CMO and CEO | Do offering to partners and prospective clients. |
| | 3 | The price of solar fuel forecasted will be increase every year. | <ul style="list-style-type: none"> Increase the COGS Make more effective and efficient system in operating activities. Increase the operating debt. | Make more effective and efficient system in operating activities | COO | COO should have a discussion with the general manager in field before discuss it with other BOD. |
| | 4 | Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. | <ul style="list-style-type: none"> Open the office's curtain in the office hours. Use telephone and water efficiently. Reduce in using paper. If the document can be send by email, send it by email. | Do all the possible actions | CFO and CEO | CFO gives the monthly report regarding the expense to CEO for evaluating the progress. |

| | | | | | | |
|------------------|---|---|---|---|-------------|--|
| BUSINESSRISK (B) | 1 | The new business expansion in batching plant still has not much client. | <ul style="list-style-type: none"> Join in tenders Approach prospective clients. | <ul style="list-style-type: none"> Approach prospective clients. | CEO and CMO | Attending business forums and use the networking that already had. |
| | 2 | There is no additional big construction project in 2017 that won by PT Karya Internusa. | <ul style="list-style-type: none"> Join in tenders. Approach prospective clients. Join as sub contractor | <ul style="list-style-type: none"> Do all the possible actions | CEO and CMO | Attending business forums and use the networking that already had. |
| | 3 | There is not much renting clients for idle heavy equipments or transportation vehicles. | <ul style="list-style-type: none"> Approach partners to rent vehicles to us. Sell the vehicles. Approach prospective clients | <ul style="list-style-type: none"> Approach partners to rent vehicles to us. | CEO and CMO | Approach client's directors. |

Company Planning

Before making assumptions for pro forma statement, company planning also has to be considered. The chosen method for knowing company's planning is doing interviews with the board of directors. The result will be shown below:

| Year | Planning |
|------|--|
| 2014 | Company keeps focus on the completion of civil projects, developing batching plant business, and try to make the idle vehicles are rented. |
| | Buy more small dump trucks for delivery backfill materials to the project's work place, because the bridge in Sembayat can only passed by car until small dump trucks. |
| | Borrow some money to BRI Bank at 5 billions rupiahs. |
| | Company wants to make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. |
| 2015 | This is the completion year of the Sembayat bridge reparation. So company will be focused on the backfill business again and try to fulfill the backfill shortage in the projects and selling. |
| | Company still tries to keep increasing the number of clients in batching plant business. |
| 2016 | Since PT Karya Internusa is the main contractor partner with PT Petrokimia Gresik who has a discourse to build their own delivery harbor, the company will be participated in the reclamation process. |
| | Company still tries to keep increasing the number of clients in batching plant business. |
| 2017 | Company will be focused on the completion progress of reclamation (project in 2016) |
| | Company still tries to keep increasing the number of clients in batching plant business. |
| 2018 | The CEO of PT Karya Internusa, Mr. Nadlir Malik, has a plan to make a pipe factory with his friends which is the building process will be divided into two company, one of them is PT Karya Internusa. |
| | Company keeps increasing the number of clients in batching plant business. |

Company Value

Pessimistic Scenario

Pessimistic scenario is the worst scenario that company assumes. The calculation will be shown below:

| PESSIMISTIC | | | | | IDR |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| ACCOUNTS | 2014 | 2015 | 2016 | 2017 | 2018 |
| Sales revenue | 143,115,798,448 | 173,693,065,733 | 238,465,182,544 | 309,979,625,998 | 401,801,200,707 |
| Cost of Goods Sold | (119,278,128,241) | (143,917,964,611) | (198,174,070,562) | (259,643,619,918) | (340,703,314,352) |
| Gross Profit | 23,837,670,206 | 29,775,101,123 | 40,291,111,983 | 50,336,006,080 | 61,097,886,355 |
| General & Administrative Expense | (9,344,037,711) | (10,923,001,961) | (12,794,247,015) | (15,013,779,342) | (18,065,773,652) |
| Operating Income | 14,493,632,495 | 18,852,099,162 | 27,496,864,967 | 35,322,226,738 | 43,032,112,703 |
| Tax Payment | 4,058,217,098.70 | 5,278,587,765.44 | 7,699,122,190.89 | 9,890,223,486.70 | 12,048,991,556.86 |
| Operating Income After Tax | 10,435,415,396.66 | 13,573,511,396.85 | 19,797,742,776.58 | 25,432,003,251.52 | 30,983,121,146.20 |
| Depreciation (11.34%) | 5,346,085,166 | 5,517,444,237 | 6,020,825,752 | 6,709,829,776 | 7,575,125,020 |

| | | | | | |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Operating Cash Flow | 15,781,500,562.39 | 19,090,955,633.63 | 25,818,568,529.04 | 32,141,833,027.02 | 38,558,246,166.16 |
| Less: Changes in Net Working Capital | (145,520,568) | 1,638,782,440 | 2,464,378,823 | 3,072,161,528 | 3,113,760,594 |
| Less: Capital Expenditure | 8,732,692,944 | 7,028,547,156 | 10,459,816,191 | 12,785,702,994 | 15,205,594,548 |
| Free Cash Flow | 7,194,328,185.87 | 10,423,626,037.17 | 12,894,373,515.05 | 16,283,968,504.58 | 20,238,891,024.31 |
| Free Cash Flow Terminal Value | | | | | 210,887,663,310 |
| Discount Factor (WACC) | 16.94% | | | | |
| Perpetuity Growth | 6.70% | | | | |
| Present Value - Free Cash Flow | 6,152,153,400 | 7,622,415,929 | 8,063,265,830 | 8,707,788,974 | 9,254,890,068 |
| Present Value - Terminal Value | | | | | 180,338,347,281 |
| Total Present Value of Free Cash Flow | 220,138,861,481 | | | | |

Most Likely Scenario

Most likely is the scenario that company expects to be happened in the real situation. Here is the calculation:

| MOST LIKELY | | | | | IDR |
|--------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| ACCOUNTS | 2014 | 2015 | 2016 | 2017 | 2018 |
| Sales revenue | 152,510,702,567 | 185,155,839,799 | 251,866,226,882 | 329,831,386,500 | 431,465,528,708 |
| Cost of Goods Sold | (125,423,349,395) | (151,116,823,539) | (205,628,072,451) | (271,203,666,298) | (359,070,444,673) |
| Gross Profit | 27,087,353,172 | 34,039,016,259 | 46,238,154,431 | 58,627,720,203 | 72,395,084,035 |
| General & Administrative Expense | (9,009,789,976) | (10,165,046,005) | (11,481,664,631) | (12,982,828,878) | (15,080,081,201) |
| Operating Income | 18,077,563,196 | 23,873,970,254 | 34,756,489,800 | 45,644,891,325 | 57,315,002,834 |
| Tax Payment | 5,061,717,694.80 | 6,684,711,671.12 | 9,731,817,143.90 | 12,780,569,570.86 | 16,048,200,793.60 |
| Operating Income After Tax | 13,015,845,501 | 17,189,258,583 | 25,024,672,656 | 32,864,321,754 | 41,266,802,041 |
| Depreciation (11.34%) | 5,462,259,291 | 5,870,850,375 | 6,915,370,128 | 8,362,581,504 | 10,205,426,958 |
| Operating Cash Flow | 18,478,104,792 | 23,060,108,958 | 31,940,042,784 | 41,226,903,258 | 51,472,228,998 |
| Less: Changes in Net Working Capital | (94,964,079) | 1,266,507,216 | 2,086,680,142 | 2,971,708,961 | 3,166,583,365 |
| Less: Capital Expenditure | 9,873,330,257 | 9,473,946,356 | 16,126,302,695 | 21,124,586,578 | 26,456,268,701 |
| Free Cash Flow | 8,699,738,614 | 12,319,655,386 | 13,727,059,947 | 17,130,607,718 | 21,849,376,932 |
| Free Cash Flow Terminal Value | | | | | 227,668,800,646 |
| Discount Factor (WACC) | 16.94% | | | | |
| Perpetuity Growth | 6.70% | | | | |
| Present Value - Free Cash Flow | 7,439,489,152 | 9,008,912,745 | 8,583,971,396 | 9,160,526,008 | 9,991,337,041 |
| Present Value - Terminal Value | | | | | 194,688,558,787 |
| Total PV of FCF | 238,872,795,129 | | | | |

Optimistic Scenario

It is the highest expectation of the company. The calculation of optimistic scenario of PT Karya Intermusa will be shown below:

| OPTIMISTIC | | | | | IDR |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| ACCOUNTS | 2014 | 2015 | 2016 | 2017 | 2018 |
| Sales revenue | 161,905,606,686 | 196,658,410,029 | 267,613,456,046 | 352,393,040,305 | 464,590,430,420 |
| Cost of Goods Sold | (131,916,390,069) | (158,996,912,726) | (216,291,659,632) | (286,668,673,342) | (382,310,350,563) |
| Gross Profit | 29,989,216,617 | 37,661,497,302 | 51,321,796,414 | 65,724,366,963 | 82,280,079,857 |
| General & Administrative Expense | (8,708,157,668) | (9,486,807,268) | (10,338,584,331) | (11,270,504,824) | (12,648,119,293) |
| Operating Income | 21,281,058,949 | 28,174,690,035 | 40,983,212,083 | 54,453,862,139 | 69,631,960,564 |
| Tax Payment | 5,958,696,505.67 | 7,888,913,209.71 | 11,475,299,383.30 | 15,247,081,398.99 | 19,496,948,957.88 |
| Operating Income After Tax | 15,322,362,443 | 20,285,776,825 | 29,507,912,700 | 39,206,780,740 | 50,135,011,606 |
| Depreciation (11.34%) | 5,896,006,137 | 6,366,987,870 | 7,550,929,361 | 9,198,274,209 | 11,311,373,416 |
| Operating Cash Flow | 21,218,368,580 | 26,652,764,695 | 37,058,842,061 | 48,405,054,950 | 61,446,385,022 |

| OPTIMISTIC | | | | | IDR |
|--------------------------------------|-----------------|----------------|----------------|----------------|-----------------|
| ACCOUNTS | 2014 | 2015 | 2016 | 2017 | 2018 |
| Less: Changes in Net Working Capital | (8,629,880,765) | 1,433,699,920 | 3,994,249,928 | 4,626,105,641 | 5,258,479,782 |
| Less: Capital Expenditure | 14,132,005,197 | 10,520,265,936 | 17,991,330,519 | 23,725,124,722 | 29,945,405,223 |
| Free Cash Flow | 15,716,244,148 | 14,698,798,839 | 15,073,261,614 | 20,053,824,586 | 26,242,500,016 |
| Free Cash Flow Terminal Value | | | | | 273,444,799,977 |
| Discount Factor (WACC) | 16.94% | | | | |
| Growth | 6.70% | | | | |
| Present Value - Free Cash Flow | 13,439,579,398 | 10,748,693,210 | 9,425,794,528 | 10,723,704,886 | 12,000,235,214 |
| Present Value - Terminal Value | | | | | 233,833,418,827 |
| Total PV of FCF | 290,171,426,063 | | | | |

So, from that three scenario, it can be concluded that the company value of PT Karya Intermusa is in the range from IDR 220,138,861,481 to IDR 290,171,426,063.

Conclusion

There are some future risk that should be solved by the company like:

1. There is a broken bridge in Sembayat sub-district, which usually connects the dump truck with the backfill material inventory. The reparation will be done in early of 2015. This is a critical risk for the company because it will make the company cannot supplies or sells the material to the project or customers. It becomes critical because income portion of backfill is 70% in construction's income. So, buying more small dump trucks become the mitigation action because the maximum vehicle load for the bridge now is small dump truck.

2. The Government of Gresik makes a discourse that they will increase the employee salary every year. This risk will effect the company's profit. So, the mitigation risk is increase the company's income because company wont to reduce the employees.
3. The price of solar fuel forecasted will be increase every year. It will reduce the company's profit. The company will make an effective and efficient system in operating activities as the action to mitigate the risk.
4. Company fails in make a trial to reduce the addition of administration, electricity, telephone and water expenses for next 5 year starts in 2014. The risk impact to the company will not be big, but still company want to reduce it. So, the company will does all possible mitigation's action like open the office's curtain in the office hours, use telephone and water efficiently, reduce in using paper by sending the document via email if the document is not required in print.
5. The new business expansion in batching plant still has not much clients. To mitigate it, the company will approach the prospective clients.
6. There is no additional big construction project in 2017 that won by PT Karya Intemusa. It is not critical and less likely to be happened because the company won the tender frequently but it will be critical if the company cannot get them. So, the mitigation actions are join tenders, approach prospective clients, and join become a sub-contractor in big project.
7. There is not much renting clients for idle heavy equipments or transportation vehicles. To mitigate it, the company approach its partners to rent to PT Karya Intemusa.

The high value of PT Karya Intemusa is caused by the low percentage of weighted average cost of capital which makes the company's value is high. Besides, the perpetuity growth is also quite high so it also makes the value higher.

Recommendation For Company

Regarding to the PT Karya Intemusa's plan to do Initial Public Offering (IPO) in the next five years and also with the present value of the company, there are some strategies that can be taken with the management in order to increase the value of PT Karya Intemusa. The strategies are:

1. Risk management
It is important for PT Karya Internusa to enhance the risk management to prevent for any possible loss that might be occurred to the company and the stakeholders in it. By applying risk management, it will not only attract new customers and investors, but also increase the company growth.
2. Determine optimal capital structure
For maximizing the profitability of a company, determine the optimal capital structure is needed. Changing the financial type and use promising securities can be done to determine optimal capital structure.
PT Karya Internusa has two types of financial source, which are debt and paid-in capital from the commissioner and director. With the debt, the company should pay the interest and it will reduce the company's profit. Moreover, the high level of debt will reduce the value of the company. Regarding to the condition, PT Karya Internusa should find the optimal capital structure for the company to earn return of the company. For example, the shareholders add the amount of the paid-in capital or the company invest in innovative and promising securities. So, the company only covers sufficient cost of debt and cost of equity, which will increase the company's value. From determine optimal capital structure, the weighted average cost of capital can be lower.

3. Increase and maintain company growth

Since company growth determines the company value, the increasing of it will be increase the company value and it should be maintained in the future. There are some strategies to increase and maintain company growth:

- Company can eliminate the new capital expenditure that earn less than the cos of capital to increase the company profit which can increase the company growth too.
- PT Karya Internusa should increase their sales. It will be affected the company value.
- Developing the company name and image as a marketing strategy, because it will help the company to get new customers and investors. Once the company name and image is trusted, customers and investors will be come by their self. And it can be maintained the growth of the company. But this strategy very takes times and budgets.

For Further Research

It will be great if the next researcher use another method in identify and measure the risk, which is Quantitative Method. This method will present more specific probability of occurrence because it will be estimated statistically. Quantitative method includes a calculation of the single loss expectancy (SLE) of an asset. The single loss expectancy can be defined as the loss of value to asset based on a single security incident. The team then calculates the Annualized Rate of Occurrence (ARO) of the threat to the asset. The ARO is an estimate based on the data of how often a threat would be successful in exploiting vulnerability. From this information, the Annualized Loss Expectancy (ALE) can be calculated. The annualized loss expectancy is a calculation of the single loss expectancy multiplied by the annual rate of occurrence, or how much an organization could estimate to lose from an asset based on the risks, threats, and vulnerabilities. It then becomes possible from a financial perspective to justify expenditures to implement countermeasures to protect the asset. From this method, it will help the researcher categorize the risk level and priority more detail. So the company can take the best mitigation regarding the risk.